

What is claimed is

1. A method, comprising:

obtaining a plurality of e-mails intended for distribution to a plurality of respective destinations; and processing the plurality of e-mails solely within non persistent storage, without requiring that information indicative of the e-mails be written to and then read from persistent storage during the processing of the e-mails.

2. A method as in claim 1, further comprising storing, in persistent storage, recovery information indicative of the processing, said recovery information being used for recovery from a system fault.

3. A method as in claim 2, wherein said recovery information includes information indicative of a plurality of e-mails, wherein each information indicative of each e-mail is indicative of less than the entire e-mail.

4. A method as in claim 3, wherein said information indicative of the e-mail includes a bit vector.

5. A method as in claim 1, wherein said processing arranging information about the e-mails into queues, each queue representing a single domain, and further comprising sending e-mails to a recipient, by sending a plurality of e-mails from the queue to a single domain, at a specific sending instance.

6. A method as in claim 5, wherein said sending comprises opening a communication channel to a single specified domain, sending a plurality of e-mails within the single communication channel.

7. A method as in claim 3, wherein said recovery information includes numerical designations which represent each e-mail, and a state of processing of said e-mails.

8. A method as in claim 5, further comprising selecting a queue to be processed, and sending e-mails from the queue all at once to the single domain.

9. A method as in claim 8, wherein said selecting comprises selecting a queue which has the greatest number of the e-mails within the queue.

10. A method as in claim 8, wherein said selecting comprises selecting a queue which has existed for greatest period of time.

11. A method as in claim 8, further comprising, during selection of a first queue, asynchronously looking up domain name server information for a second queue, different than the first, selecting queue.

12. A method as in claim 1, further comprising processing the e-mails by separating personalized information about each e-mail from non-personalized information.

13. A method as in claim 12, wherein said non-personalized information includes destination information for the e-mail.

14. A method as in claim 5, wherein said processing comprises determining information about processing by said domain, and adjusting a speed of processing of the e-mails based on said information of processing of said domain.

15. A method as in claim 14, wherein said information about processing comprises speed of e-mail processing.

16. A method as in claim 1, further comprising:
maintaining a log representing information relating to e-mails which have been processed in said software package;
and

comparing contents of said log with licensing information, to determine if said information e-mails exceeds a licensed number.

17. A method, comprising:
obtaining a plurality of e-mails for processing;
storing recovery information about a state of processing of the e-mails to persistent storage, wherein said recovery information comprises less than the entirety of the e-mail; and

processing the e-mails to direct the e-mails to a desired location without writing the e-mail to persistent storage during said processing.

18. A method as in claim 17, wherein said processing comprises sending e-mails from an e-mail client to a desired location.

19. A method as in claim 17, wherein said processing comprises receiving e-mails and distributing said e-mails to specified destinations.

20. A method as in claim 17, wherein said recovery information includes information indicative of a plurality of e-mails, wherein each information indicative of each e-mail is indicative of less than the entire e-mail.

21. A method as in claim 19, wherein said information indicative of the e-mail includes a bit vector.

22. A method as in claim 17, wherein said processing arranging information about the e-mails into queues, each queue representing a single domain, and further comprising sending e-mails to a recipient, by sending a plurality of e-mails to a single domain at a specific sending instance.

23. A method as in claim 18, wherein said sending comprises opening a communication channel to a single specified domain, and sending a plurality of e-mails within the single communication channel.

24. A method as in claim 17, wherein said recovery information includes numbers of e-mails, and states of processing of said e-mails.

25. A method as in claim 22, further comprising selecting a queue to be processed, and sending e-mails from the queue all at once to the single domain.

26. A method as in claim 25, wherein said selecting comprises selecting a queue which has the most number of the e-mails within the queue.

27. A method as in claim 25, wherein said selecting comprises selecting a queue which has existed for greatest period of time.

28. A method as in claim 25, further comprising, during selection of a first queue, asynchronously looking up domain name server information for a second queue, different than the selecting queue.

29. A method as in claim 17, further comprising processing the e-mails by separating personalized information about each e-mail from non-personalized information.

30. A method as in claim 29, wherein said non-personalized information includes destination information for the e-mail.

31. A method as in claim 22, wherein said processing comprises determining a speed of processing of said domain, and adjusting a speed of processing of the e-mails based on said speed of processing of said domain.

32. A method as in claim 17, further comprising maintaining a log representing information relating to e-mails which have been processed; and comparing contents of said log with licensing information, to determine if said information e-mails exceeds a licensed number.

33. A method, comprising:
obtaining a plurality of e-mails for processing:
forming queue information about said e-mails, which

assigns e-mails to one of a plurality of queues, each of the plurality of queues representing a destination for the e-mails; and

processing said e-mails in said queues to send said e-mails to said destination; and

adjusting a rate of said processing of said e-mails based on a rate of processing at said destination, to thereby carry out load-balancing.

34. A method as in claim 33, wherein said processing comprises:

processing the plurality of e-mails solely within non persistent storage, without requiring that information indicative of the e-mails be written to and then read from persistent storage during the processing of the e-mails.

35. A method as in claim 34, further comprising storing, in persistent storage, recovery information indicative of the processing, said recovery information being used for recovery from a system fault.

36. A method as in claim 35, wherein said recovery information includes information indicative of a plurality of e-mails, wherein each information indicative of each e-mail is indicative of less than the entire e-mail.

37. A method as in claim 36, wherein said recovery information indicative of the e-mail includes a bit vector.

38. A method as in claim 33, further comprising sending e-mails to a recipient, by sending a plurality of e-mails to a single domain at a specific sending instance.

39. A method as in claim 38, wherein said sending comprises opening a communication channel to a single specified domain, sending a plurality of e-mails within the single communication channel.

40. A method as in claim 36, wherein said recovery information includes numbers of e-mails, and states of processing of said e-mails.

41. A method as in claim 33, further comprising selecting a queue to be processed, and sending e-mails from the queue all at once to the single domain.

42. A method as in claim 41, wherein said selecting comprises selecting a queue which has the most number of the e-mails within the queue.

43. A method as in claim 41, wherein said selecting comprises selecting a queue which has existed for greatest period of time.

44. A method as in claim 41, further comprising, during selection of a first queue, asynchronously looking up domain name server information for a second queue, different than the selecting queue.

45. A method as in claim 33, further comprising processing the e-mails by separating personalized information about each e-mail from non-personalized information.

46. A method as in claim 45, wherein said non-personalized information includes destination information for the e-mail.

47. A method as in claim 33, further comprising
maintaining a log representing information relating to
e-mails which have been processed; and
comparing contents of said log with licensing
information, to determine if said information e-mails
exceeds a licensed number.

48. A method, comprising:
processing a plurality of e-mails in an e-mail
software package;
maintaining a log representing a number of e-mails which
have been processed in said software package; and
comparing results contents of said log with licensing
information, to determine if a number of e-mails which has
been processed exceeds the e-mails which have been
licensed.

49. A method as in claim 48 further comprising:
processing the plurality of e-mails solely within non
persistent storage, without requiring that information
indicative of the e-mail be written to and then read from
persistent storage during the processing of the e-mail.

50. A method as in claim 49, further comprising storing, in persistent storage, recovery information indicative of the processing, said recovery information being used for recovery from a system fault.

51. A method as in claim 50, wherein said recovery information includes information indicative of a plurality of e-mails, wherein each information indicative of each e-mail is indicative of less than the entire e-mail.

52. A method as in claim 48, wherein said processing arranging information about the e-mails into queues, each queue representing a single domain, and further comprising sending e-mails to a recipient, by sending a plurality of e-mails to a single domain at a specific sending instance.

53. A method as in claim 52, wherein said sending comprises opening a communication channel to a single specified domain, sending a plurality of e-mails within the single communication channel.

54. A method as in claim 50, wherein said recovery information includes numbers of e-mails, and states of processing of said e-mails.

55. A method as in claim 52, further comprising selecting a queue to be processed, and sending e-mails from the queue all at once to the single domain.

56. A method as in claim 55, wherein said selecting comprises selecting a queue which has the most number of the e-mails within the queue.

57. A method as in claim 55, wherein said selecting comprises selecting a queue which has existed for greatest period of time.

58. A method as in claim 55, further comprising, during selection of a first queue, asynchronously looking up domain name server information for a second queue, different than the selecting queue.

59. A method as in claim 49, wherein said processing comprises determining a speed of processing of said domain, and adjusting a speed of processing of the e-mails based on said speed of processing of said domain.

60. A method, comprising:

obtaining a plurality of e-mails for processing;

forming organization information about said e-mails,

representing destinations for the e-mails;

sending a plurality of e-mails to a specific destination at a specific time; and

during the time of said sending, looking up a domain name information asynchronously, for a different specific destination to be sent at a future time.

61. A method as in claim 60, further comprising:

processing the plurality of e-mails solely within non persistent storage, without requiring that information indicative of the e-mail be written to and then read from persistent storage during the processing of the e-mail.

62. A method as in claim 61, further comprising

storing, in persistent storage, recovery information indicative of the processing, said recovery information being used for recovery from a system fault.

63. A method as in claim 61, wherein said recovery information includes information indicative of a plurality of e-mails, wherein each information indicative of each e-mail is indicative of less than the entire e-mail.

64. A method as in claim 60, wherein said processing arranging information about the e-mails into queues, each queue representing a single domain, and further comprising sending e-mails to a recipient, by sending a plurality of e-mails to a single domain at a specific sending instance.

65. A method as in claim 64, wherein said sending comprises opening a communication channel to a single specified domain, sending a plurality of e-mails within the single communication channel.

66. A method as in claim 63, wherein said recovery information includes numbers of e-mails, and states of processing of said e-mails.

67. A method as in claim 64, further comprising selecting a queue to be processed, and sending e-mails from the queue all at once to the single domain.

68. A method as in claim 67, wherein said selecting comprises selecting a queue which has the most number of the e-mails within the queue.

69. A method as in claim 67, wherein said selecting comprises selecting a queue which has existed for greatest period of time.

70. A method as in claim 67, further comprising, during selection of a first queue, asynchronously looking up domain name server information for a second queue, different than the selecting queue.

71. A method as in claim 63, wherein said processing comprises determining a speed of processing of said domain, and adjusting a speed of processing of the e-mails based on said speed of processing of said domain.

72. A method as in claim 60, further comprising maintaining a log representing numbers of e-mails which have been processed in said software package; and comparing contents of said log with licensing information, to determine if said numbers of e-mails exceeds a licensed number.

73. A method, comprising:

obtaining a plurality of e-mails for processing;
forming organization information about said e-mails
representing cues of the e-mails that are intended for
distribution to a common destination;
determining which queue to send that, based on
characteristics of the e-mails in the queue.

74. A method as in claim 73, further comprising:

processing the plurality of e-mails solely within non
persistent storage, without requiring that information
indicative of the e-mail be written to and then read from
persistent storage during the processing of the e-mail.

75. A method as in claim 73, wherein said selecting
comprises selecting a queue which has the most number of
the e-mails within the queue.

76. A method as in claim 73, wherein said selecting
comprises selecting a queue which has existed for greatest
period of time.

77. A method as in claim 73, further comprising, during selection of a first queue, asynchronously looking up domain server name server information for a second queue, different than the selecting queue.

78. A method as in claim 73, further comprising storing, in persistent storage, recovery information indicative of the processing, said recovery information being used for recovery from a system fault.

79. A method as in claim 73, wherein said recovery information includes information indicative of a plurality of e-mails, wherein each information indicative of each e-mail is indicative of less than the entire e-mail.

80. A method as in claim 73, wherein said processing arranging information about the e-mails into queues, each queue representing a single domain, and further comprising sending e-mails to a recipient, by sending a plurality of e-mails to a single domain at a specific sending instance.

81. A method as in claim 80, wherein said sending comprises opening a communication channel to a single specified domain, sending a plurality of e-mails within the single communication channel.

82. A method as in claim 80, wherein said processing comprises determining a speed of processing of said domain, and adjusting a speed of processing of the e-mails based on said speed of processing of said domain.

83. A method as in claim 73, further comprising maintaining a log representing numbers of e-mails which have been processed in said software package; and comparing contents of said log with licensing information, to determine if said numbers of e-mails exceeds a licensed number.